UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
09/925,671	08/09/2001	Bo Arthur Einar Tjellstrom	11133Z	3329

7590 08/27/2003

SCULLY, SCOTT, MURPHY & PRESSER
400 Garden City Plaza
Garden City, NY 11530

EXAMINER
ROARK, JESSICA H

ART UNIT	PAPER NUMBER
1644	

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

400 Garden City Plaza
Garden City, New York 11530
(516) 742-4343 - Telephone
(516) 742-4366 – Facsimile
e:mail: intrprop@ssmp.com

SCULLY, SCOTT, MURPHY & PRESSER

Fax

To:	Examiner Jessica Roark USPTO **Art Unit: 1644**	**From:**	Frank S. DiGiglio, Esq.
Fax:	703-746-5174	**Pages:**	5 (including cover)
Phone:		**Date:**	August 22, 2003
Re:	B. Tjellstrom et al. U.S. Patent Appln. No. 09/925,671 Our Docket: 11133Z	**CC:**	

☐ **Urgent** ☐ **For Review** **Please Comment** **Please Reply** ☐ **Please Recycle**

Dear Examiner Roark:

Please see attached.

If you have any problems concerning this facsimile, please call (516) 742-4343 and for Anna Baerga.

Telephonic Interview Agenda

Date: August 26, 2003
Attendants: Jessica H. Roark and Philip Gambel from the United States Patent and Trademark Office
Zhuang Yuan and Frank S. DiGiglio from Scully, Scott, Murphy and Presser
Re: U.S. Application. No. 09/925,671

---

1. In the Official Action dated June 2, 2003, the Examiner has objected to the Applicant's claim for priority as allegedly lacking written support. In particular, the Examiner alleged that it is unclear if the "pooled human polyclonal immunoglobulin preparation" recited in the claims of the present application is supported by the "human immunoglobulin preparation" disclosed in the priority applications, i.e., the provisional application 60/074,193 and the parent application U.S. Application Serial No. 09/247, 396 ("the '396 application"). Applicant wishes to clarify with the Examiners during the course of interview that both recitations of "pooled human polyclonal immunoglobulin preparation" and "human immunoglobulin preparation" are fully supported by the priority applications.

    a. In the Official Action dated May 22, 2000, with respect to the '396 application, Examiner Martha Lubet rejected Claims 1-2 and 4-7 under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 5,869,048 issued to Das ("Das"). In the response to the Action, Applicant argued that Das does not teach the invention disclosed in the '396 application. Applicant wishes to further indicate in the interview that Das and the '396 application disclose two different products and processes. While Das teaches a method for treating ulcerative colitis by administering a humanized monoclonal antibody, the '386 application discloses a method for treating inflammatory bowel disease by administering a human immunoglobulin preparation. In other words, Das employs monoclonal antibodies prepared from mice whereas the present invention employs pooled immunoglobulins prepared from blood serum of human, i.e., polyclonal, non-antigen specific, human antibodies. Applicant thus submits that the recitation of a "human immunoglobulin preparation" in the original claims of the '386 application is distinguished from prior art.

    b. However, in an effort to expedite favorable prosecution, Applicant amended the claims in the '386 application to recite a "pooled human polyclonal immunoglobulin preparation." Applicant wishes to indicate in the interview that the amendment does not add new matter. Applicant submits that the amendment merely delineates what has been disclosed in the priority applications. A human immunoglobulin preparation pooled

from the serum of many individuals cannot be monoclonal or antigen specific and must be polyclonal and non-antigen specific. In fact, Applicant submits that human monoclonal antibodies, i.e., mAb from a suitable human myeloma cell line, have not been successfully made yet. Even considering the Examiner's argument that a polyclonal antibody can be antigen specific, Applicant directs the Examiner's attention to the fact that the claims in the present application recite "pooled human polyclonal immunoglobulin preparation." It will be clear to one skilled in the art that such pooled immunoglobulins from the human serum as disclosed in the present invention must be polyclonal and non-antigen specific. Applicant notes that the Examiner, in the paragraph 9 of the Action, also admits that the intact immunoglobulin preparation obtained from blood serum fractions "is a pooled human polyclonal immunoglobulin preparation."

c. Applicant further submits that the written description requirement does not require that the application disclose every detail that is well known in the art. *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 231 USPQ 81 (Fed Cir. 1986). A critical element of the written description requirement calls for the Examiner to determine whether applicant has demonstrated possession of the claimed invention. *MPEP* 2163. Applicant submits that the present invention discloses a pooled human immunoglobulin preparation which is well known to the skilled artisan as non-antigen specific and polyclonal, even though the application does not specifically use the term "polyclonal." One skilled in the art would also believe that Applicant was in possession of the claimed invention at the time the priority applications were filed.

d. Therefore, Applicant submits that the claims reciting either "pooled human polyclonal immunoglobulin preparation" or "human immunoglobulin preparation" are allowable.

e. In addition, in a 102(b) rejection to the present invention, the Examiner cited Tjellstrom et al. (Acta Paediatr 1997; 86:221-23). The Examiner alleges that Tjellstrom et al. disclose IgAbulin and the present application discloses that IgAbulin is a commercial immunoglobulin preparation for use in the present invention. The Examiner then indicates that "IgAbulin must be a pooled human polyclonal immunoglobulin preparation." The Examiner thus concludes that the present invention is allegedly anticipated by Tjellstrom et al. Applicant submits that the Examiner has interpreted the claims in the present invention inconsistently, i.e., in two different ways with respect to the written support and the prior art rejections.

2. § 103a rejection: Claims 1-10 as being unpatentable over the Hassig patent and the Hardie patent.
   a. The Hassig patent is directed to the use of intravenously injectable, polyvalent, intact immunoglobulin in the treatment of chronic

inflammatory diseases of the bowel, e.g. ulcerative colitis and Crohn's disease (Abstract; col. 1, lines 6-8; and col. 4, lines 1-4 and 15-16).

b. The Hardie patent is directed to the use of oral immunoglobulin in treating enteric infections (col. 7, l. 10). The invention comes from the observation, "that breast-fed newborn infants are better protected against gastrointestinal infection than formula-fed infants" (col. 1, lines 44-46). Hardie's infant study, exemplifying his invention, "demonstrates that the infants stool contained significant quantities of undigested and intact IgG and that this coproantibody retained significant opsonic activity for Type III Group B *Streptococci*" (col. 6, line 67 - col. 7, line 3). Hardie then concludes that, "Oral IG, therefore, may be used in prevention or treatment of enteric infections, e.g. E. coli, V. cholera, S. typhosa or intoxications, e.g. botulism, since intact IgG with opsonic activity persisted in the gastrointestinal tract and thus is available to function in such prevention or treatment." (col. 7, lines 3-8) Hardie does not mention or refer to the treatment of inflammatory diseases. Hardie does not mention or refer to ulcerative colitis or Crohn's disease.

c. In distinction to enteric diseases, caused by microorganisms or their products (such as are recited by Hardie, *supra*, Hassig notes that "[c]ertain inflammatory conditions of the bowel are of unknown etiology and are difficult to treat" (emphasis added, col. 1, lines 9-10). Hassig goes on to specify ulcerative colitis (col. 1, line 11) and Crohn's disease (col. 1, line 13) as examples of these inflammatory conditions of "unknown etiology."

d. It would have been clear to one skilled in the art at the time of the present invention that antibiotics could be used successfully to treat enteric infections. It would have also been clear that antibiotics had been tried and were not effective in treating the majority of patients with inflammatory bowel conditions, such as ulcerative colitis or Crohn's disease. Thus, at the time of present invention, the invention of Hardie would not have been thought to be extendable to the treatment of these other disease conditions.

e. The Hassig patent was filed when the Hardie patent was issued. The Hassig patent provides no suggestion or motivation that methods for the treatment of enteric infections, the etiology of these being known to be microbial, would have any application or utility in the treatment of the inflammatory diseases which Hassig was seeking to treat. In fact, one of ordinarily skilled in the art at the time of the present invention would not have connected the "opsonic activity" of the IgG in the gut, remarked upon by Hardie, *supra*, with the anti-inflammatory activity of these same materials when delivered intravenously. The high molecular weight of IG and IgG would be well known to one ordinarily skilled in the art to prevent the transport of these molecules from the gut to the bloodstream. In fact, the Tjellstrom et al. reference cited by the Examiner, *vide supra*, teaches that intravenous immunoglobulin treatment has yielded varying results. See paragraph 1. Thus, it is surprising, and not obvious from the art, that the inventor of the present application discovered that IG would

be effective from the luminal side of the gut in treating an inflammatory condition such as ulcerative colitis or Crohn's disease.

f. Accordingly, the examiner's combination of the Hassig and Hardie patents can, in fact, only be made with the benefit of hindsight, derived from the disclosure of the present application. In addition, even if one is motivated from the disclosure of the Hassig patent to use immunoglobulin preparation for the treatment of inflammatory bowel disease, there is no expectation of success.